

at least one electrode lead partially housed by the interior chamber;  
a single continuous elongated mandrel forming a shaft of the electrode  
lead; and

an overwind component operatively associated with the mandrel at a  
predetermined position.

5. Delete

### **REMARKS**

In the Office Action mailed September 9, 2002, the Examiner rejected claims 1-18 of the present invention. The Examiner rejected claims 1-2 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,054,810 to Yamamoto et al. The Examiner also rejected claims 1-2 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 5,932,969 to Ikeuchi et al. Claims 1-7, 9-12 and 14-18 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,208,070 B1 to Sugimoto et al. ("Sugimoto"). The Examiner also rejected claims 8 and 13 under 35 U.S.C. §103(a) as being unpatentable over Sugimoto. The Examiner further rejected claims 1-6 and 11 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,751,111 to Stoffels et al. in view of Ikeuchi. The Examiner further rejected claims 8, 9, 10, 13 and 14-17 under §103(a) as being unpatentable over Stoffels in view of Ikeuchi. Finally, the Examiner rejected claims 7 and 12 under 35 U.S.C. §103(a) as being unpatentable over Stoffels and Ikeuchi and further in view of U.S. Patent No. 3,832,590 to Yamazaki et al.

Claims 1-4 and 6-18 remain pending in the application.

#### **I. Claims 1-2 are not Anticipated by Yamamoto or Ikeuchi.**

Claims 1-2 were rejected by the Examiner under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,054,810 to Yamamoto et al ("Yamamoto") as well as U.S. Patent No. 5,932,969 to Ikeuchi et al. ("Ikeuchi"). The Examiner stated that both of these references disclosed a ceramic metal halide lamp comprising an envelope, an elongated interior chamber disposed within the envelope having a lamp body located therein, at least one electrode lead partially housed by the interior chamber, and a single continuous elongated mandrel forming a shaft of the electrode lead. Applicant submits that claims 1 and 2 as presently amended are not

anticipated by either Yamamoto or Ikeuchi. Amended claim 1 of the present application from which claim 2 depends now also recites an overwind component operatively associated with the mandrel in a predetermined position. Neither Yamamoto nor Ikeuchi disclose such an overwind component. Therefore, neither reference anticipates claims 1-2.

**II. Claims 1-7, 9-12 and 14-18 are not Anticipated by Sugimoto.**

Claims 1-7, 9-12 and 14-18 were rejected by the Examiner under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,208,070 to Sugimoto et al. ("Sugimoto"). The Examiner stated that Sugimoto discloses a ceramic metal halide lamp comprising an envelope, an elongated interior chamber disposed within the envelope having a lamp body (discharge tube 1) located therein (lines 46-48 of column 3), at least one electrode lead (17a of Figure 3) partially housed by the interior chamber (11 of Figure 2) and a single continuous elongated mandrel (16a and 19a) forming a shaft of the electrode lead (lines 23-26 of column 4, and 61-65 of column 4, and line 3 of column 5).

This rejection was discussed at length by the Applicants in the previously filed response dated August 5, 2002. In that response, Applicants noted the fact that Sugimoto fails to disclose a single continuous mandrel forming a shaft to the electrode lead as required by the present claims. The Examiner failed to even address the Applicants' arguments in the most recent Office Action. To restate, the present claims are not anticipated by Sugimoto because Sugimoto fails to disclose or suggest a single continuous mandrel forming a shaft to the electrode lead. Claim 1 of the present application specifically calls for a ceramic metal halide lamp that comprises an envelope, an elongated interior chamber disposed within the envelope having a lamp body located therein, at least one electrode lead partially housed by the interior chamber, and a single continuous elongated mandrel forming a shaft of the electrode lead. Furthermore, independent claims 9 and 14 also specifically call for at least one electrode lead having a single continuous elongated mandrel.

The Examiner contends that the single continuous elongated mandrel claimed in the present invention is anticipated by structures 16a and 19a of Fig. 2 of Sugimoto. Applicants submit, however, that Sugimoto is distinguishable from the presently claimed subject matter since Sugimoto does not contemplate that 16a and

19a are a single continuous mandrel. As stated in Sugimoto at column 4, lines 24-30:

The electrodes 17a and 17b of the present embodiment comprise feed portions 16a and 16b, and electrode rods 19a and 19b...[T]he electrode coils 15a and 15b connect the ends of the feed portions 16a and 16b to the ends of the electrode rods 19a and 19b.

Sugimoto refers to a wire coil as wrapping around the separate structures (i) a "feed portion" (16a) and (ii) the "electrode rod" (19a). Further, as illustrated in the figures of Sugimoto, a single continuous mandrel is not shown; and in fact, Sugimoto clearly shows the use of two separate pieces for the mandrel as is denoted by the line separating 16a and 19a in Figures 2, 3 and 9 (denoted by numbers 26a and 29a). Furthermore, there is no suggestion nor disclosure of using a single continuous mandrel anywhere in Sugimoto. As such, it cannot be said that the mandrel as disclosed in Sugimoto constitutes a single, continuous elongated mandrel as is claimed by the present invention.

As described above, Sugimoto merely discloses a structure wherein a feed portion 16a and an electrode rod 19a are held together by a coil wrapping around them. As such, at most the two parts are merely abutted against each other, and certainly don't form a "single continuous" piece as claimed in the present application.

It is well accepted that a patentee may be his own lexicographer. In such situations, "dictionary definitions of ordinary words are rarely dispositive of their meaning in a technical context. A word describing patented technology takes its definition from the context in which it is used by the inventor." *Anderson v. International Engineering & Manufacturing, Inc.*, 48 USPQ2d 1631 (Fed. Cir. 1998). Here, the specification clearly indicates that the term "single continuous" refers to a structure having a single, one-piece construction. For example, the specification states, "Because the mandrel is formed from a single element, the present invention eliminates the weld arrangement." page 3, line 21-23. Further evidence of this can be found on page 6, line 24-32, which states:

The use of a single piece of wire to form the shank or mandrel negates the need to weld two separate pieces of wire together and

overcomes the issues...associated with the conventional electrode lead wire assembly. Rather a shaft 50 constructed of one piece of wire rather than two advantageously provides a stronger and more easily manufactured assembly.

Therefore, because Sugimoto does not disclose a "single continuous" elongated mandrel, applicants respectfully submit that Sugimoto does not anticipate the presently claimed subject matter. Furthermore, Sugimoto provides no suggestion to modify its disclosed arrangement to meet the elements of the claimed invention, and the Examiner has not cited any prior art that does so. In particular, with respect to claims 1-7, 9-12 and 14-18, Sugimoto does not disclose nor suggest the use of a single continuous elongated mandrel. Rather, Sugimoto teaches that the mandrel constitutes separate cylindrical pieces joined together.

As such, Applicants respectfully request that the Examiner remove all rejections of claims 1-7, 9-12 and 14-18 over Sugimoto under 35 U.S.C. §102(e) and allow the claims as written.

### **III. Claims 8 and 13 are Unobvious Over Sugimoto**

The Examiner rejected claims 8 and 13 under 35 U.S.C. §103(a) as being unpatentable over Sugimoto as applied to claim 1 and claim 9 above. The Examiner argued that Sugimoto met all of the claimed limitations of claims 8 and 13 except for the limitation of the outside diameter of the overwind component being greater than the outside diameter of the electrode tip coil. The Examiner then argued that the limitation of having an outside diameter of the overwind portion greater than the outside diameter of the electrode tip does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. The Examiner then concluded that such limitation would be considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious.

As with the §102 rejection above, Applicants discussed this rejection at length in the previous submitted response. The Examiner failed to even consider these arguments as he presents no discussion of this issue in the most recent Office Action.

Specifically, Applicants submit that claims 8 and 13 are patentable over Sugimoto as applied to claims 1 and 9 as described above. That is, despite the Examiner's assertion, Sugimoto fails to meet all of the claims of 8 and 13 because it does not disclose or suggest the use of a "single continuous" elongated mandrel. Furthermore, claim 8 of the present invention of the present application specifically calls for a ceramic metal halide lamp wherein the electrode lead includes an electrode tip coil disposed at one of the mandrel and an overwind component received over the other end of the mandrel, where the outside diameter of the overwind component is greater than the outside diameter of the electrode tip coil. Claim 13 of the present application specifically calls for a ceramic metal halide lamp with a mandrel that is formed from a single piece of tungsten wire where the outside diameter of the overwind component is greater than the outside diameter of the electrode tip coil.

In the present Office Action, the Examiner completely disregards similar arguments made in a previous response. Applicants have no duty to state the benefits of a claim element. It does not follow that a failure to do so allows the Examiner to simply allege that such a feature would therefore be a matter of choice which would have been obvious to a person of ordinary skill in the art. The Examiner is required to provide some motivation as to why a claimed feature would have been obvious. The failure to provide a stated benefit for a claim element is not a proper motivation.

Even assuming for purposes of argument that the claim limitation does not solve any stated problem, the Examiner is not relieved of a responsibility to provide a teaching for that limitation in the prior art. Applicants respectfully request the Examiner demonstrate such a teaching rather than rely on an unsupported allegation of choice. Notwithstanding the fact that applicants have no duty to discuss the benefits of the present invention, in view of the lack of prima facie obviousness, the following observations are provided in order to expedite prosecution.

The Examiner argued that the limitation of having an outside diameter of the overwind portion greater than the outside diameter of the electrode tip coil is not within the scope of the teachings applied. However, Applicants submit that the present application at page 7, lines 21-28 discusses the advantages and applicability of the limitation. As mentioned, the present application states:

It will be appreciated that the invention lends itself to different size wires being wound about the mandrel, particularly where dissimilar materials are used for the electrode tip and the overwind component. For example, the diameter of the molybdenum wire forming the overwind component is preferably larger than the diameter of the tungsten wire forming the electrode tip.

Applicants submit that the limitation is within the scope of the teachings applied and that the presently claimed subject matter is important when using different sized wires that are being wound about the mandrel, especially where dissimilar materials are used for the electrode tip and the overwind component. The use of an overwind component diameter that is larger than the electrode tip diameter is important to achieve one of the goals of the present invention, providing for a more stable mandrel. As stated in the present application on page 3, at lines 30-34:

Another advantage of the invention resides in the improved concentricity of the electrode tip, which reduces arc tube wall corrosion, resulting in increased lamp life and better performance.

As such, it is clear from the specification that having an outside diameter of the overwind portion that is greater than the outside diameter of the electrode tip coil would result in improved concentricity of the electrode tip which, as stated in the application, would reduce arc tube wall corrosion and result in increased lamp life and better performance. As such, it cannot be said that the claim limitation does not solve any stated problem or yield any unexpected result.

Therefore, Applicants submit that the present claimed subject matter of claims 8 and 13 is not obvious in view of Sugimoto and is not a matter of choice which a person of ordinary skill in the art would find obvious. As such Applicants respectfully request the Examiner remove all rejections under §103(a) of claims 8 and 13 and allow the claims as written.

**IV. Claims 1-6, 8, 9, 10, 11, and 13-17 are Patentable Over Stoffles in View of Ikeuchi.**

The Examiner rejected claims 1-6, 8, 9, 10, 11, and 13-17 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,751,111 to Stoffles et al ("Stoffles") in view of U.S. Patent No. 5,932,969 to Ikeuchi et al. ("Ikeuchi").

It is the Examiner's position that Stoffles discloses all of the elements of the present claims except a single continuous mandrel which the Examiner believes is disclosed by Ikeuchi. The Examiner stated that it would have been obvious to use a single continuous mandrel as disclosed by Ikeuchi in the device of Stoffles since this would provide exact positioning of the electrodes and also reduces corrosion.

To properly combine the teachings of two or more references under §103, there must be some motivation to combine the references. Here, the Examiner states that the motivation to combine Ikeuchi with Stoffles would be to "provide exact positioning of the electrodes and also reduces corrosion." The Applicants respectfully disagree that such motivation exists in this case. This is because the advantages that Ikeuchi seeks to impart (i.e., exact electrode positioning and reduce corrosion), are not a factor in the ceramic metal halide lamps as disclosed in Stoffles. Ikeuchi specifically recognizes this fact where he states :

"[I]n a sodium high pressure lamp, in an arc tube made of transparent aluminum oxide, scaling bodies of aluminum oxide are inserted which are penetrated by power supply wires of niobium which are hermetically sealed to the outer faces of the scaling bodies of sealing glass. In a lamp of this type, there is no process in which the glass is flame-welded. Therefore, the above described disadvantage that the positions of the electrodes are often inexact does not arise." (See col. 3, lines 39-45.)

This is the exact type of lamp disclosed in Stoffles. Therefore, Ikeuchi actually teaches away from using his arrangement in the device of Stoffles. As such, there is no motivation to combine the two references and references therefore fail to disclose or suggest all of the elements of the present claims.

**V. Claims 7 and 12 are Patentable Over Stoffles and Ikeuchi in View of Yamazaki.**

The Examiner rejected claims 7 and 12 under 35 U.S.C. §103(a) as being unpatentable over Stoffles and Ikeuchi in view of U.S. Patent No 3,832,590 to

Yamazaki. The Examiner stated that the combined structures of Stoffles in view of Ikeuchi meet all limitations of claims 7 and 12 except for a single continuous mandrel being formed of tungsten which is disclosed by Yamazaki.

As discussed above, there is no motivation to combine the teachings of Stoffles with the teaching of Ikeuchi. Therefore, even assuming for purposes of arguments that all of the elements of the present claims can be found separately in the noted references, there is no motivation to combine these references to meet all of the recitations of the claims. Therefore, claims 7 and 12 are not rendered unpatentable under § 103(a) by the teachings of Stoffles, Ikeuchi and Yamazaki.

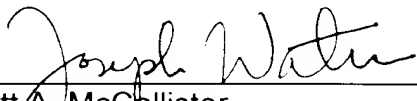
### CONCLUSION

In view of the above remarks, Applicants respectfully submit that the rejections set forth in the Office Action of September 9, 2002 have been overcome. Accordingly, Applicants submit that claims 1-4 and 6-18 are in condition for allowance. Withdrawal of the rejections and early notification of allowability are earnestly solicited. Should any issues remain, the Examiner is encouraged to contact the undersigned to resolve any such issues. If any fees are due in conjunction with this response, the Examiner is authorized to deduct such fees from Deposit Account No. 06-0308.

Respectfully submitted,

FAY, SHARPE, FAGAN,  
MINNICH & MCKEE, LLP

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\_\_\_\_\_  
Scott A. McCollister  
Reg. No. 33,961  
Joseph E. Waters  
Reg. No. 50,427  
1100 Superior Avenue  
Seventh Floor  
Cleveland, Ohio 44114-2518  
(216) 861.5582

Attachment: Version to Show Changes Made



VERSION TO SHOW CHANGES MADE

In the Claims:

1. (Amended) A ceramic metal halide lamp comprising  
an envelope;  
an elongated interior chamber disposed within the envelope having a  
lamp body located therein;  
at least one electrode lead partially housed by the interior chamber;  
[and]  
a single continuous elongated mandrel forming a shaft of the electrode  
lead; and  
an overwind component operatively associated with the mandrel at a  
predetermined position.
5. Delete